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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,077	12/03/2001	Bruno Colin	BONN-060	7932
32954	7590	06/14/2006	EXAMINER	
JAMES C. LYDON 100 DAINGERFIELD ROAD SUITE 100 ALEXANDRIA, VA 22314			LUDLOW, JAN M	
			ART UNIT	PAPER NUMBER
			1743	

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/936,077

Applicant(s)

COLIN ET AL.

Examiner

Jan M. Ludlow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9 and 13-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/7/2001</u> . | 6) <input type="checkbox"/> Other: _____  |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 9, 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumitomo (4314605) in view of Faigle (5413872).

Sumitomo teaches a plate condenser having two compartments defined between a lower plate and upper plate (instant partition). Deep grooves (m) lacking capillarity

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are formed between shallow grooves having capillarity as shown with shaded water retained (col. 3, lines 1-5). The shallow grooves meet in channels 2' (col. 1, line 54, Fig. 1) for collecting the contents of the shallow grooves, constituting the instant reaction zone.

Sumitomo fails to teach a planar surface.

Faigle teaches a device similar to that of Sumitomo et al. As an alternative to rounded undulating wavy plates, planar wavy plates may be used (e.g., col. 3, lines 35-38; Figs. 7-8, 10 and 14).

It would have been obvious to make the device of Sumitomo with at least one planar surface in order to use a known alternative to rounded undulations in heat/mass exchangers as taught by Faigle. With respect to claims 15-16, it would have been obvious to one of ordinary skill in the art to make the collection channels 2' of capillary dimension in order to continue using capillarity to enhance flow as in the shallow grooves draining into channels 2'. Alternatively, it would have been obvious to make the collection channels 2' of a greater size in order to provide a greater flow by gravity (col. 4, lines 19-20, 38-39). The examiner notes that although Sumitomo is silent as to the size of channels 2', the channels 2' must inherently satisfy at least one of claims 15-16.

5. Applicant's arguments filed March 23, 2006 have been fully considered but they are not persuasive.

Applicant argues that the prior art applied is non-analogous because it is outside applicant's field of endeavor and is not reasonably pertinent to the particular problem

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with which the inventor is involved and cites *In re Clay*, 966 F.2d 656, 23 USPQ2d 1058 (Fed. Cir. 1992). The instant fact set differs from that of *Clay* in that the instant claims are apparatus claims not limited to any field of endeavor, whereas *Clay* involved method claims directed to a specific field of endeavor, namely, "A process for storing a refined liquid hydrocarbon product in a storage tank having a dead volume between the bottom of said tank and an outlet port in said tank". Applicant argues that the instant field of endeavor is fluid micromanipulation, which includes transferring liquids for the purpose of diagnostic testing, but the instant claims are not so limited. The examiner has given the claims their broadest reasonable interpretation, and the claims as written are broad. Both Sumitomo and the instant invention are directed to channeling fluids through capillary grooves separated by a deeper groove, and are therefore analogous art. Sumitomo and Faigle are both directed to heat exchanger plates and are therefore analogous with one another.

Applicant argues that the instant problem to be solved is reduction of strong retention forces in a fluid micromanipulation apparatus, but the claims are not so limited. Applicant argues that Sumitomo does not teach the non-mixing feature, but Figures 2-7 of Sumitomo show that the fluids (shaded areas) in neighboring capillary grooves do not mix because the intervening deep groove keeps the fluids in the capillary grooves from merging as shown until the channels intersect as shown in Figure 1.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jan M. Ludlow whose telephone number is (571) 272-1260. The examiner can normally be reached on Monday-Thursday, 11:30 am - 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jan M. Ludlow  
Primary Examiner  
Art Unit 1743

Jml  
June 7, 2006